Indiana Department of Natural Resources Division of Forestry

RESOURCE DRAFT MANAGEMENT GUIDE

Morgan-Monroe State ForestCompartment11Tract 13Total Tract acreage: 160 acresCommercial Acres: 160Date: 7/12/11

Forester: D. Ramey / T. Tompkins

Location

Tract 32 is located in Monroe County, Sections 10,11,14,&15, T10N, R1W. The tract is located off of Chambers Pike road west of Hindustan.

General Description

The cover type within this tract is primarily mixed hardwood with a large mixed oak and yellow poplar component. There are also a few Virginia pine stands located on the edge of the tract along Chambers Pike road. Forty acres of this tract were harvested approximately five years ago before being acquired by the State (Leatherwood Acquisition). The 2010 inventory data noted the frequency of tree & shrub species within each size category by dominance.

Sawtimber	Pole	Sub-Merchantable
Yellow Poplar	Sugar maple	Sugar maple
Black oak	Sassafras	Dogwood
White oak	White oak	American beech
Northern Red oak	Scarlet oak	Yellow Poplar
Scarlet oak	Yellow poplar	Black Cherry
Sugar Maple	Pignut Hickory	Black Locust
White Ash	American Beech	Bitternut Hickory
Pignut Hickory	Red Maple	American Elm
Largetooth Aspen	Black Oak	White Oak
American Sycamore	Largetooth Aspen	
Blackgum	Blackgum	
Sassafras	Red Oak	
American Beech	Black Cherry	
Bitternut Hickory	Shagbark Hickory	
Black Cherry	American Sycamore	
Virginia Pine	Black Walnut	
Green Ash	Virginia Pine	
Black Walnut		
Basswood		
Red Maple		

History

This acreage was acquired by Morgan-Monroe State Forest in 1931 and later in 2008 in the Leatherwood Acquisition there was added an additional 40 acres.

Resource management history for tract 13:

1931	Land purchased
06/30/1982	Inventory by D. Breedlove
09/23/1982	Boundary Marked by D. Breedlove
01/17/1983	Timber Marked, 295,146 Bd. Ft. sold by D. Breedlove
02/15/1983	Road and yard construction

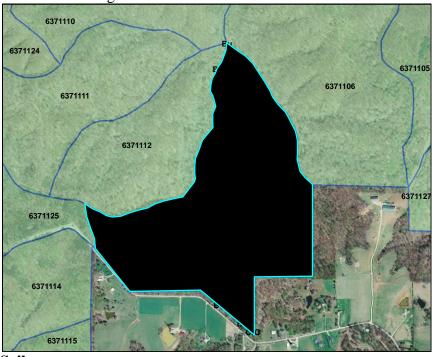
03/30/1983	Timber Sale - \$37,150 sold to Crone Lumber Company.
08/31/1983	Road close out
12/22/1983	Timber Stand Improvement
01/16/08	Leatherwood acquisition, 40 acres added to tract.
12/20/2010	New tract inventory completed by Forester Tompkins.

Landscape Context

This tract is surrounded by managed State Forest on three sides and private lands to the south and southeast. Portions of the adjacent private lands are forested, residential or grazing(horse farm). Portions of this tract were heavily harvested by private individuals around 2007. A recent harvest in 2010 was observed by the south landowner that lies north of Chambers Pike Road.

Topography, Geology and Hydrology

The tract is comprised of about 31% ridgetop and the remaining acreage covers sideslopes with all aspects and slopes range from 5-65%. The soil types noted in the next section are unglaciated soils and have formed from the bedrock material of sandstone, shale and siltstone. The tract has one perennial stream that runs from the southeast corner of the tract through the middle and becomes the northwestern boundary.



Soils			
BkF	Berks-Weikert complex	25 – 75% slope	Sandstone-Bedrock – 38"
SI - 70	Well drained. Most areas wo	oodland. Soil suited to	trees.
151.29 Acres	Severely limited to dwellings	s with basements due to	o slope and bedrock.
BdB	Bedford silt loam	2 – 6% slope	Fragipan at depth of 20-30"
SI - 75	Moderately well drained. A	few areas in woodland	. Soil suited to trees.
4.9 Acres	Moderately limited to building swelling.	ngs because of wetness	s, shrinking and
CrC	Crider silt loam	6 – 12% slope	Subsoil – 58" thick
SI - 88	Well drained. Many areas in	cultivated crops. Soil	well suited to trees.
3.12 Acres	Moderately limited to buildings due to steepness of slope.		
Bu	Burnside silt loam.	Nearly level. Sands	tone-Bedrock – 44"

SI – 95 Well drained. Many areas pasture or crops. Soil suited to trees.
 .08 Acres Limited to building sites due to flooding. Absorption fields limited.
 (Note: Building skid trails on the contour and constructing waterbars are measures taken to reduce erosion potential. SI = Site Index.)

Access

Two access gates into firetrails created from the last timber harvest are located off of Chambers Pike road. These gates control the primary access routes into the tract and afford the public excellent access. These accesses will need rehabilitation & stoning improvements prior to any management operation. Archaeological clearance will be submitted for this work in 2011.

Boundary

This tract is surrounded by State Forest on three sides and private lands to the south and southeast. Chambers Pike road borders most of the southern boundary of this tract. The south boundaries were relocated and remarked in 2009 by Forester Ramey following the Leatherwood Acquisition. Current private property line markings are up to date.

Wildlife

Wildlife resources in this tract are abundant. Common species which are present include: squirrels, white-tailed deer, turkey, various small furbearing animals, and a variety of songbirds. The inventory for this tract included recording structural habitat features at each data point; these records include snag (dead, standing tree) counts. The results of these collected data for snag counts are included on the bat guidelines form for this tract.

Legacy trees*	Maintenance level	Inventory Available ab	
			Maintenance
11" + DBH	1440	3294	1854
20" + DBH	480	594	114

*Species include American elm, Bitternut hickory, Cottonwood, Green ash, Red oak, Post oak, Red elm, Shagbark hickory, Shellbark hickory, Silver maple, Sugar maple, White ash and White oak

Snags (all species)	Maintenance level	Optimal level	Inventory	Available above Maintenance	Available above Optimal
5" + DBH	640	1120	1003	363	-117
9" + DBH	480	960	496	16	-464
19" + DBH	80	160	34	-46	-126

Cavity trees (all species)	Maintenance level	Optimal level	Inventory	Available above Maintenance	Available above Optimal
7" + DBH	640	960	127	-513	-833
11" + DBH	480	640	127	-353	-513
19" + DBH	80	160	33	-47	-127

Communities

An Indiana Natural Heritage Database review was obtained for this tract. If, rare, threatened or endangered species were identified for this area, the activities prescribed in this guide will be conducted in a manner that will not threaten the viability of those species.

Invasives/Exotics

No invasives or exotics were noted during the inventory. In the event they are discovered during further management activities efforts to eradicate or slow the spread of them will be conducted.

Recreation

This tract is heavily used for hunting, hiking and wildlife viewing. The two public parking areas off of Chambers Pike road provide excellent recreational access to the tract.

Cultural Resources

Cultural resources may be present on this tract but their location is protected. Adverse impacts to significant cultural resources will be avoided during any management or construction activities.

Inventory Results December 2010

(The inventory data for the 40 acres harvested prior to State Acquisition is not shown)

Present tract volume estimates: Basal Area (includes sub-merch. stems)

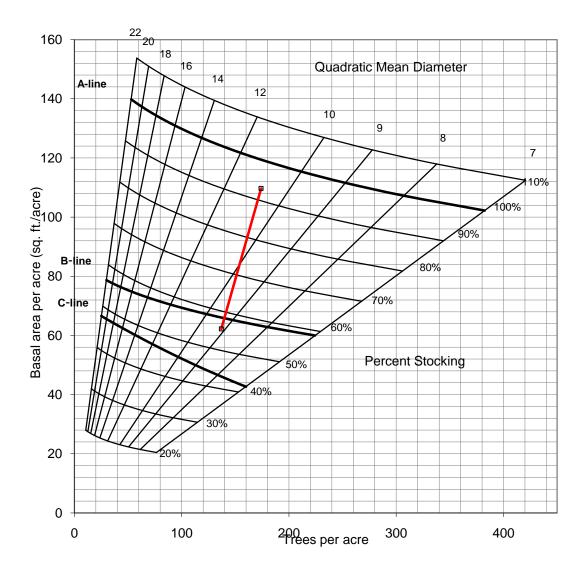
Harvest volume 4,836 Bd. Ft./acre 47.2 Leave volume 5,131 Bd. Ft./acre. 62.2 Total tract 9,996 Bd. Ft./acre 109.7

Harvest/Leave Report Summary(120 acre unharvested area) MBF=1000 board feet

SPECIES	HARVEST	LEAVE	TOTAL
	MBF	MBF	MBF
Yellow Poplar	189.15	180.14	369.29
Black Oak	123.77	170.44	297.63
Northern Red Oak	66.36	93.33	159.69
White Oak	46.16	85.18	131.34
Scarlet Oak	43.21	37.54	80.75
Sugar Maple	30.78	10.29	41.07
White Ash	18.82	4.67	23.5
American Sycamore	0.0	18.86	18.86
Pignut Hickory	6.01	7.99	14.0
Largetooth Aspen	13.18	0.0	13.18
American Beech	9.28	0.0	9.28
Bitternut Hickory	6.07	2.98	9.05
Black Cherry	8.83	0.0	8.83
Blackgum	5.06	0.0	5.06
Basswood	4.37	0.0	4.37
Red Maple	4.04	0.0	4.04
Green Ash	2.98	0.0	2.98
Black Walnut	0.0	2.84	2.84
Virginia Pine	2.26	0.0	2.26
Sassafras	0.0	1.47	1.47
Totals			
TRACT TOTAL(MBF)	580.33	615.73	1199.47
PER ACRE TOTAL(MBF)	4.84	5.13	9.99

Discrepancies due to rounding.

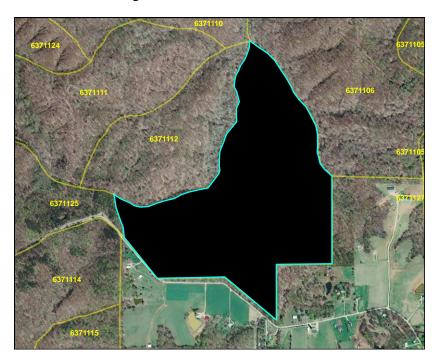
Hardwood stand Acreage	120 acres	Present Volume per Acre	9,996 bd. ft.
Basal Area per Acre	109.7 sq.	Harvest Volume per Acre	4,836 bd. ft.
	ft.		
Number Trees per Acre	174	Residual Volume per	5,131 bd. ft.
		Acre	
Stocking Percentage	97%	Average Tree Size	8.8" dbh.



Tract Prescription and Proposed Activities

This tract is comprised primarily of mixed oak/hickory and yellow poplar stands with two or three small pole and small sawtimber Virginia pine stands. The inventory results indicate this tract would sustain and benefit from a harvest this cutting cycle. The prescription for this tract is an intermediate, improvement harvest utilizing single-tree selection as well as the application of some group selection (regeneration) openings. Portions of the tract have good pole-sized oaks in the canopy of mature oak and yellow poplar stands, these could be released by harvesting the mature timber. Most of the tract has good quality sawtimber timber that requires thinning or release with mature and overmature stands that need regeneration. The application of TSI is

planned post harvest to complete these openings as well as release timber not released from an intermediate cutting.



The marking objective will be the removal of mature & over-mature stems, as well as harvesting low quality individuals in an effort to improve the overall health, vigor and composition of the stand. The reduction of stocking should provide space for pre-selected crop trees to move forward into the next cutting cycle. Species composition is likely to become more diverse and less susceptible to insect and disease infestation which is a common problem with homogeneous stands. These management techniques will improve the tract's forest health and quality of the residual stand, while utilizing stems that would have dropped out due to natural mortality, overstocking or maturity. In group selection areas some good quality trees in and around openings will be left for seed sources. Post harvest TSI is planned to reduce stocking in some areas of high basal area with pole-sized stems and release crop trees not successfully released during the harvest.

Wildlife will benefit from this harvest as well. Additional sunlight penetrating the forest floor will simulate the development of new ground flora, subsequently increasing nesting and foraging habitat. This is essential for game and non-game species as well as continued forest development. Post-harvest TSI will increase snags per acre while diversifying diameter distributions of both snags and growing stock trees.

Habitat/cover types currently present within the tract will remain throughout the majority of the tract after the proposed management activities with the possible addition of additional early successional wildlife areas in regeneration openings. These openings may be up to 15 acres in size. Overall, it is expected that a large timber sale of over 300,000 BF could be marked in the next 2 years.

Proposea	Activities	Listing

Archaeological Site review Timber marking & sale Timber harvest Post harvest TSI & Exotic Control

Date Planned

2016, 2023, 2030 2030

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You must indicate the State Forest Name, Compartment Number and Tract Number in the "Subject or file reference" line to ensure that your comment receives appropriate consideration. Comments received within 30 days of posting will be considered.

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